



Practitioner's Docket No. 015575-8

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Francisco Jose MUNOZ PEREZ, et al.**

Serial No.: 10/520,696

Group No.: - -

Filed: January 5, 2005

Examiner: - -

For: **PLANT NUCLEOTIDE-SUGAR PYROPHOSPHATASE/PHOSPHODIESTERASE (Nppase),
METHOD OF OBTAINING SAME AND USE OF SAME IN THE PRODUCTION OF ASSAY
DEVICES AND IN THE PRODUCTION OF TRANSGENIC PLANTS**

Mail Stop Sequence

Commissioner for Patents

P. O. Box 1450

Alexandria, VA 22313-1450

**SUBMISSION OF "SEQUENCE LISTING," COMPUTER READABLE COPY,
AND/OR AMENDMENT PERTAINING THERETO
FOR BIOTECHNOLOGY INVENTION CONTAINING NUCLEOTIDE
AND/OR AMINO ACID SEQUENCE**

CERTIFICATION UNDER 37 C.F.R. 1.8(a) and 1.10*

*(When using Express Mail, the Express Mail label number is mandatory;
Express Mail certification is optional.)*

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

- ☒ deposited with the United States Postal Service in an envelope addressed to the Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

37 C.F.R. 1.8(a)

37 C.F.R. 1.10*

- ☒ with sufficient postage as first class mail.

- ☐ as "Express Mail Post Office to Address"
Mailing Label No. _____ (mandatory)

TRANSMISSION

- ☐ transmitted by facsimile to the Patent and Trademark Office. to **(571)-273-8300**

Date: April 17, 2006

Signature

JANETT CORD *JOHN RICHARDS*
(type or print name of person certifying)

***WARNING:** Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. 1.10(b).

"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

BEST AVAILABLE COPY

(check and complete this item, if applicable)

1. ☒ This replies to the Office Letter dated March 17, 2006

NOTE: If these papers are filed before the office letter issues, adequate identification of the original papers should be made, e.g., in addition to the name of the inventor and title of invention, the filing date based on the "Express Mail" procedure, the serial number from the return post card or the attorney's docket number added.

☒ A copy of the Office Letter is enclosed.

IDENTIFICATION OF PERSON MAKING STATEMENT

2. I, Janet I. Cord
(type or print name of person signing below)

state the following:

ITEMS BEING SUBMITTED

3. Submitted herewith is/are

(check each item as applicable)

- A. ☒ "Sequence Listing(s)" for the nucleotide and/or amino acid sequence(s) in this application. Each "Sequence Listing" is assigned a separate identifier as required in 37 C.F.R. 1.821(c) and 37 C.F.R. 1.822 and 1.823.
- B. ☒ An amendment to the description and/or claims, wherein reference is made to the sequence by use of the assigned identifier, as required in 37 C.F.R. 1.821(d).
- C. ☒ A copy of each "Sequence Listing" submitted for this application in computer readable form, in accordance with the requirements of 37 C.F.R. 1.821(e) and 1.824.
- D. ☐ Please transfer to this application, in accordance with 37 C.F.R. 1.821(e), the computer readable copy(ies) from applicant's other application identified as follows:

NOTE: "If the computer readable form of a new application is to be identical with the computer readable form of another application of the applicant on file in the Office, reference may be made to the other application and computer readable form in lieu of filing a duplicate readable form in the new application. The new application shall be accompanied by a letter making such reference to the other application and computer readable form, both of which shall be completely identified." 37 C.F.R. § 1.821(e).

In re application of:

Serial No.:

Filed:

For:

Group No.:

Examiner:

The Computer readable form(s) of applicant's other application corresponds or compares to the "Sequence Identifier(s)" of this application as follows:

Computer Readable Form
(other applications)

"Sequence Identifier"
(this application)

E. ☒ A statement that the content of each "Sequence Listing" submitted and each computer readable copy are the same, as required in 37 C.F.R. 1.821(f).

☐ Because the statement is not made by a person registered to practice before the Office, the Statement is verified as required in 37 C.F.R. 1.821(b).

F. ☒ Because this submission is made in fulfilling the requirement under 37 C.F.R. 1.821(g), a statement that the submission includes no new matter.

☐ Because the statement is not made by a person registered to practice before the Office, the statement is verified, as required in 37 C.F.R. 1.821(g).

**STATEMENT THAT "SEQUENCE LISTING"
AND COMPUTER READABLE COPY ARE THE SAME
AND/OR THAT PAPERS SUBMITTED INCLUDES NO NEW MATTER**

4. I hereby state:

(complete applicable item A and/or B)

A. ☒ Each computer readable form submitted in this application, including those forms requested to be transferred from applicant's other application, is the same as the "Sequence Listing" to which it is indicated to relate.

B. ☒ All papers accompanying this submission, or for which a request for transfer from applicants' other application, introduce no new matter.

STATUS

5. Applicant is

☒ a small entity:

☐ other than a small entity.

EXTENSION OF TERM

6.

NOTE: 37 C.F.R. § 1.704(b)". . . an applicant shall be deemed to have failed to engage in reasonable efforts to conclude processing or examination of an application for the cumulative total of any periods of time in excess of three months that are taken to reply to any notice or action by the Office making any rejection, objection, argument, or other request, measuring such three-month period from the date the notice or action was mailed or given to the applicant, in which case the period of adjustment set forth in § 1.703 shall be reduced by the number of days, if any, beginning on the day after the date that is three months after the date of mailing or transmission of the Office communication notifying the applicant of the rejection, objection, argument, or other request and ending on the date the reply was filed. The period, or shortened statutory period, for reply that is set in the Office action or notice has no effect on the three-month period set forth in this paragraph."

NOTE: "Extension of Time in Patent Cases (Supplement Amendments) If a timely and complete response has been filed after a Non-Final Office Action, an extension of time is not required to permit filing and/or entry of an additional amendment after expiration of the shortened statutory period.

If a timely response has been filed after a Final Office Action, an extension of time is required to permit filing and/or entry of a Notice of Appeal or filing and/or entry of an additional amendment after expiration of the shortened statutory period unless the timely-filed response placed the application in condition for allowance. Of course, if a Notice of Appeal has been filed within the shortened statutory period, the period has ceased to run." Notice of Dec. 10, 1985 (1061 O.G. 34-35).

NOTE: See 37 C.F.R. 1.645 for extensions of time in interference proceedings and 37 C.F.R. 1.550(c) for extensions of time in reexamination proceedings.

7. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply.

(complete (a) or (b) as applicable)

(a) ☐ Applicant petitions for an extension of time under 37 C.F.R. 1.136 (fees: 37 C.F.R. 1.17(a)(1)-(4)) for the total number of months checked below:

<u>Extension (months)</u>	<u>Fee for other than small entity</u>	<u>Fee for small entity</u>
<input type="checkbox"/> one month	\$120.00	\$60.00
<input type="checkbox"/> two months	\$450.00	\$225.00
<input type="checkbox"/> three months	\$1,020.00	\$510.00
<input type="checkbox"/> four months	\$1,590.00	\$795.00

Fee \$ _____

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

- ☐ An extension for _____ months has already been secured, and the fee paid therefor of \$ _____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$ _____

OR

- (b) ☒ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

FEE PAYMENT

8. ☐ Attached is a check in the sum of \$ _____.
- ☐ Charge Account No. _____ the sum of \$ _____.
A duplicate of this transmittal is attached.

FEE DEFICIENCY

9.

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G. 31-33.

10. ☒ If any additional extension and/or fee is required, charge Account No. 12-0425.

SIGNATURE(s)

(type or print name of person signing statement)

Signature

Date

P.O. Address of Signatory

(If applicable)

Tel. No.: ()
Reg. No.

- ☐ Inventor
☐ Assignee of complete interest
☐ Person authorized to sign on behalf of assignee
☐ Practitioner of record
☐ Filed under Rule 34(a)
☐ Registration No. _____
☐ Other _____
(specify identity of person signing)

(complete the following, if applicable)

(type name of assignee)

Address of assignee

Title of person authorized to sign on behalf of assignee

A "STATEMENT UNDER 37 C.F.R. 3.73(b)" is attached.

Assignment recorded in PTO on _____
Reel _____ Frame _____

Reg. No. 33,778

Tel. No.: (212)708-1935

SIGNATURE OF PRACTITIONER

JOHN RICHARD ROWE 3105
For Janet I. Cord
(type or print name of practitioner)

P.O. Address

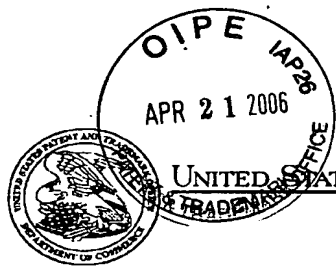
c/o Ladas & Parry LLP
26 West 61st Street
New York, N.Y. 10023

Customer No.:



00140

PATENT TRADEMARK OFFICE



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/520,696	Francisco Jose Munoz Perez	U 015575-8

INTERNATIONAL APPLICATION NO.

PCT/ES03/00363

I.A. FILING DATE	PRIORITY DATE
07/15/2003	07/15/2002

140
 LADAS & PARRY
 26 WEST 61ST STREET
 NEW YORK, NY 10023

CONFIRMATION NO. 9657

371 FORMALITIES LETTER



OC000000018279667

Date Mailed: 03/17/2006

NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495)

- Indication of Small Entity Status
- Priority Document
- Copy of the International Application filed on 01/06/2005
- Copy of the International Search Report filed on 01/06/2005
- Copy of IPE Report filed on 01/06/2005
- Preliminary Amendments filed on 10/19/2005
- Information Disclosure Statements filed on 10/19/2005
- Biochemical Sequence Diskette filed on 10/19/2005
- Oath or Declaration filed on 10/19/2005
- Small Entity Statement filed on 01/06/2005
- Copy of references cited in ISR filed on 10/19/2005
- U.S. Basic National Fees filed on 01/06/2005
- Assignment filed on 10/19/2005
- Priority Documents filed on 01/06/2005

Applicant's response filed 10/19/2005 is hereby acknowledged. The following requirements set forth in the NOTIFICATION of MISSING REQUIREMENTS mailed 08/19/2005 have not been completed.

- This application clearly fails to comply with the requirements of 37 CFR. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998). If the effective filing date is on or after September 8, 2000, see the final rulemaking notice published in the Federal Register at 65 FR 54604 (September 8, 2000) and 1238 OG 145 (September 19, 2000). Applicant must provide an initial computer readable form (CRF) copy of the "Sequence Listing", an initial paper or compact disc copy of the "Sequence Listing", **as well as an amendment specifically directing its entry into the application.** Applicant must also provide a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825

110

(d). If applicant desires the sequence listing in the instant application to be identical with that of another application on file in the U.S. Patent and Trademark Office, such request in accordance with 37 CFR 1.821(e) may be submitted in lieu of a new CRF.

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- **For Rules Interpretation, call (571) 272-0951**
- **For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.**
- **Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov**

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

TERRY M JOHNSON VESSELS

Telephone: (703) 308-9140 EXT 221

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/520,696	PCT/ES03/00363	U 015575-8

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application-Serial-Number: 10/520,696
Source: PCR
Date Processed by STIC: 1/31/06

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT
MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER**
VERSION 4.2.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05



PCT

RAW SEQUENCE LISTING

DATE: 01/31/2006

PATENT APPLICATION: US/10/520,696

TIME: 15:49:49

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Output Set: N:\CRF4\01312006\J520696.raw

3 <110> APPLICANT: MUNOZ PEREZ, Francisco Jose
 4 RODRIGUEZ LOPEZ, Milagros
 5 BAROJA FERNANDEZ, Miren Edurne
 6 POZUETA ROMERO, Francisco Javier
 7 MITSUI, Toshiaki
 8 NANJO, Yohei
 10 <120> TITLE OF INVENTION: PLANT NUCLEOTIDE SUGAR PYROPHOSPHATASE/PHOSPHODIESTERASE
 11 (NPPASE), METHOD OF PRODUCTION, USE IN THE MANUFACTURE OF TESTING
 12 DEVICES AND IN THE PRODUCTION OF TRANSGENIC PLANTS
 14 <130> FILE REFERENCE: U015575-8
 16 <140> CURRENT APPLICATION NUMBER: 10/520696
 17 <141> CURRENT FILING DATE: 2005-01-06
 19 <150> PRIOR APPLICATION NUMBER: PCT/ES03/000363
 20 <151> PRIOR FILING DATE: 2003-07-15
 22 <160> NUMBER OF SEQ ID NOS: 24
 24 <170> SOFTWARE: PatentIn version 3.3
 26 <210> SEQ ID NO: 1
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 28 <212> TYPE: PRT
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 33 <221> NAME/KEY: misc_feature
 34 <223> OTHER INFORMATION: N-terminal end of soluble NPPase
 36 <400> SEQUENCE: 1
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 39 1 5 10 15
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 50 <223> OTHER INFORMATION: Tryptic sequence of soluble NPPase
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 54 <222> LOCATION: (6)..(6)
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 60 <223> OTHER INFORMATION: Ile (variation)
 62 <220> FEATURE:
 63 <221> NAME/KEY: MISC_FEATURE

Does Not Comply
Corrected Diskette Needed

pp 1-3

"Gln" is at location 6. Gln can only represent
 itself. Use "Xaa" instead, and
 explain in <220>-<223>
 section that it can
 represent either Gln
 or Lys.

use Xaa
same
as above

RAW SEQUENCE LISTING

DATE: 01/31/2006

PATENT APPLICATION: US/10/520,696

TIME: 15:49:49

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Output Set: N:\CRF4\01312006\J520696.raw

use Xaa and explain

64 <222> LOCATION: (10)..(10)
 65 <223> OTHER INFORMATION: Lys (variation)
 67 <400> SEQUENCE: 2
 69 Ala Ser Tyr Pro Gly Gln Thr Ser Leu Gln Arg
 70 1 5 10

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76 <213> ORGANISM: HORDEUM VULGARE CV. SCARLETT

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86 <223> OTHER INFORMATION: Met (variation)

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90 His Ala Pro Ala Asp Thr Val Thr Phe Gly Arg

91 1 5 10

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96 <212> TYPE: PRT

97 <213> ORGANISM: HORDEUM VULGARE CV. SCARLETT

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101 <221> NAME/KEY: misc_feature

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104 <400> SEQUENCE: 4

106 Ala Pro Pro Tyr Pro

107 1 5

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113 <213> ORGANISM: HORDEUM VULGARE CV. SCARLETT

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123 1 5

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138 <222> LOCATION: (1)..(1)

Use Xaa and explain

RAW SEQUENCE LISTING

DATE: 01/31/2006

PATENT APPLICATION: US/10/520,696

TIME: 15:49:49

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 190 20
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 215 <220> FEATURE:

RAW SEQUENCE LISTING

DATE: 01/31/2006

PATENT APPLICATION: US/10/520,696

TIME: 15:49:49

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Output Set: N:\CRF4\01312006\J520696.raw

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228 <213> ORGANISM: ORYZA SATIVA
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233 <223> OTHER INFORMATION: Tryptic sequence (MS/MS) of soluble NPPase
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242 <211> LENGTH: 11
243 <212> TYPE: PRT
244 <213> ORGANISM: ORYZA SATIVA
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291 <212> TYPE: PRT
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RAW SEQUENCE LISTING

DATE: 01/31/2006

PATENT APPLICATION: US/10/520,696

TIME: 15:49:49

Input Set : A:\u015575-8sequence listing.txt

Output Set: N:\CRF4\01312006\J520696.raw

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295 <220> FEATURE:
296 <221> NAME/KEY: misc_feature
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306 <211> LENGTH: 11
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318 1      5      10
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345 <223> OTHER INFORMATION: Primer of the 5' region of NPPase
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351 <210> SEQ ID NO: 19
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357 <220> FEATURE:
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365 <210> SEQ ID NO: 20
366 <211> LENGTH: 2186
367 <212> TYPE: DNA
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371 <220> FEATURE:

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18

19

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/520,696

DATE: 01/31/2006

TIME: 15:49:50

Input Set : A:\u015575-8sequence listing.txt

Output Set: N:\CRF4\01312006\J520696.raw

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